Validated By CRFValidator v 1.0.2

Application No: 10779427 Version No: 2.0

Input Set:

Output Set:

Started: 2007-06-27 15:25:25.025
Finished: 2007-06-27 15:25:26.734
Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 709 ms
Total Warnings: 29
Total Errors: 0
No. of SeqIDs Defined: 34
Actual SeqID Count: 34

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (1)
W 213	Artificial or Unknown found in <213> in SEQ ID (2)
W 213	Artificial or Unknown found in <213> in SEQ ID (3)
W 213	Artificial or Unknown found in <213> in SEQ ID (4)
W 213	Artificial or Unknown found in <213> in SEQ ID (5)
W 213	Artificial or Unknown found in <213> in SEQ ID (6)
W 213	Artificial or Unknown found in <213> in SEQ ID (7)
W 213	Artificial or Unknown found in <213> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 213	Artificial or Unknown found in <213> in SEQ ID (10)
W 213	Artificial or Unknown found in <213> in SEQ ID (11)
W 213	Artificial or Unknown found in <213> in SEQ ID (12)
W 213	Artificial or Unknown found in <213> in SEQ ID (13)
W 213	Artificial or Unknown found in <213> in SEQ ID (14)
W 213	Artificial or Unknown found in <213> in SEQ ID (15)
W 213	Artificial or Unknown found in <213> in SEQ ID (16)
W 213	Artificial or Unknown found in <213> in SEQ ID (17)
W 213	Artificial or Unknown found in <213> in SEQ ID (18)
W 213	Artificial or Unknown found in <213> in SEQ ID (19)
W 213	Artificial or Unknown found in <213> in SEQ ID (20)

Input Set:

Output Set:

Started: 2007-06-27 15:25:25.025
Finished: 2007-06-27 15:25:26.734
Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 709 ms
Total Warnings: 29
Total Errors: 0
No. of SeqIDs Defined: 34
Actual SeqID Count: 34

Error code	Error Description

This error has occured more than 20 times, will not be displayed

SEQUENCE LISTING

<110> Bojsen, Kirsten
Svendsen, Allan
Fuglsang, Claus C.
Patkar, Shamkant Anant
Borch, Kim
Vind, Jesper
Petri, Andreas
Glad, Sanne O. Schroder
Budolfsen, Gitte

<120> Lipolytic Enzyme Variants

<130> 5559.204-US

<140> 10779427
<141> 2004-11-22

<150> 09/856,819
<151> 2001-05-27

<150> PCT/DK99/00664
<151> 1999-12-29

<160> 34

<170> PatentIn version 3.4

<210> 1
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<220>
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<210> 2
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<212> DNA
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ggttgtctaa ctccttcctt ttcg 24

<210> 3
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<220>
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<400> 3
tgtcccymgw ctccckccck 19

<210> 4
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<220>
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gaagtamyry agrtgmgcag sratatc 27

<210> 5
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<212> DNA
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<400> 5
gatatysctg ckcayctryr ktacttc 27

<210> 6
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cggaatgtta ggctggttat tgc 23

<210> 7
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<400> 7
cttttcggtt agagcggatg 20

<210> 8

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<223> n = a,t,c, or g

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gtaagcgtga cataactaat tacatcatgc ggccctctag agtcgaccca gccgctamnn 60

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<223> n = a,t,c, or g

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<223> n = a,t,c, or g

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gcactacwaw nnsnnmnnnw nntdscbsga agtaccatag gtgcgcagbg atatccgg 118

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<223> n= a,t,c,g

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<223> n= a,t,c,g

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<223> n= a,t,c,g

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<223> n= a,t,c,g

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<223> n= a,t,c,g

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<223> n= a,t,c,g

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<221> misc_feature
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<223> n= a,t,c,g

<220>
<221> misc_feature
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wnnwnnsnns nnwnnsnnmn nwnntdscbs gaagtaccat aggtgcgcag bgatatccgg 120

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<211> 82
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

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acaggcgtca gtcgcctgga ag 82

<210> 12
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<212> DNA
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<220>
<223> Primer

<400> 12
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gttacaggcg tcagtcgcct gg 82

<210> 13
<211> 82
<212> DNA
<213> Artificial Sequence

<220>
<223> Primer

<400> 13
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agcgttacag gcgtcagtcg cc 82

<210> 14
<211> 82
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accagcgtta caggcgtcag tc 82

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<400> 15

Pro Val Gly Phe
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<210> 16
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 16

Ala Gly Arg Phe
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<210> 17
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 17

Pro Arg Gly Phe
1

<210> 18
<211> 4
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 18

Ala Gly Gly Phe
1

<210> 19
<211> 5
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 19

Ala Gly Gly Phe Ser
1   5

<210> 20
<211> 48
<212> PRT
<213> Artificial Sequence

<220>
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<400> 20

Ala Gly Gly Phe Ser Trp Arg Arg Tyr Arg Ser Ala Glu Ser Val Asp
1   5   10   15

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Lys Arg Ala Thr Met Thr Asp Ala Glu Leu Glu Lys Lys Leu Asn Ser
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Tyr Val Gln Met Asp Lys Glu Tyr Val Lys Asn Asn Gln Ala Arg Ser
        35                  40                  45
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<210> 21
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<212> PRT
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<220>
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```

<210> 22
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 22

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Ser Pro Ile Arg Pro Arg Pro
1               5
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<210> 23
<211> 6
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<213> Artificial Sequence

<220>
<223> Synthetic

<400> 23

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Ser Pro Pro Arg Arg Pro
1               5
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<210> 24
<211> 43
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 24

Trp Arg Arg Tyr Arg Ser Ala Glu Ser Val Asp Lys Arg Ala Thr Met
1 5 10 15

Thr Asp Ala Glu Leu Glu Lys Lys Leu Asn Ser Tyr Val Gln Met Asp
20 25 30

Lys Glu Tyr Val Lys Asn Asn Gln Ala Arg Ser
35 40

<210> 25
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 25

Ser Pro Pro Cys Gly Arg Arg Pro
1 5

<210> 26
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic

<400> 26

Ser Pro Cys Arg Pro Arg Pro
1 5

<210> 27
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
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<400> 27
agaaatcggg tatcctttca g 21

<210> 28
<211> 30

<212> DNA
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<220>
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<400> 28
gaatgacttg gttgacgcgt caccagtcac 30

<210> 29
<211> 26
<212> DNA
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<220>
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<400> 29
tctagcccag aatactggat caaatc 26

<210> 30
<211> 269
<212> PRT
<213> Rhizomucor miehei

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Ser Ile Asp Gly Gly Ile Arg Ala Ala Thr Ser Gln Glu Ile Asn Glu
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Leu Thr Tyr Tyr Thr Thr Leu Ser Ala Asn Ser Tyr Cys Arg Thr Val
20 25 30

Ile Pro Gly Ala Thr Trp Asp Cys Ile His Cys Asp Ala Thr Glu Asp
35 40 45

Leu Lys Ile Ile Lys Thr Trp Ser Thr Leu Ile Tyr Asp Thr Asn Ala
50 55 60

Met Val Ala Arg Gly Asp Ser Glu Lys Thr Ile Tyr Ile Val Phe Arg
65 70 75 80

Gly Ser Ser Ser Ile Arg Asn Trp Ile Ala Asp Leu Thr Phe Val Pro
85 90 95

Val Ser Tyr Pro Pro Val Ser Gly Thr Lys Val His Lys Gly Phe Leu
100 105 110

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Asp Ser Tyr Gly Glu Val Gln Asn Glu Leu Val Ala Thr Val Leu Asp
        115                 120                 125

Gln Phe Lys Gln Tyr Pro Ser Tyr Lys Val Ala Val Thr Gly His Ser
    130                 135                 140

Leu Gly Gly Ala Thr Ala Leu Leu Cys Ala Leu Asp Leu Tyr Gln Arg
145                 150                 155                 160

Glu Glu Gly Leu Ser Ser Ser Asn Leu Phe Leu Tyr Thr Gln Gly Gln
                165                 170                 175

Pro Arg Val Gly Asp Pro Ala Phe Ala Asn Tyr Val Val Ser Thr Gly
            180                 185                 190

Ile Pro Tyr Arg Arg Thr Val Asn Glu Arg Asp Ile Val Pro His Leu
        195                 200                 205

Pro Pro Ala Ala Phe Gly Phe Leu His Ala Gly Glu Glu Tyr Trp Ile
    210                 215                 220

Thr Asp Asn Ser Pro Glu Thr Val Gln Val Cys Thr Ser Asp Leu Glu
225                 230                 235                 240

Thr Ser Asp Cys Ser Asn Ser Ile Val Pro Phe Thr Ser Val Leu Asp
                245                 250                 255

His Leu Ser Tyr Phe Gly Ile Asn Thr Gly Leu Cys Thr
            260                 265
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<210> 31
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<212> PRT
<213> Rhizopus delemar

<400> 31

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1               5                   10                  15

Phe Thr Lys Tyr Ala Gly Ile Ala Ala Thr Ala Tyr Cys Arg Ser Val
            20                  25                  30

Val Pro Gly Asn Lys Trp Asp Cys Val Gln Cys Gln Lys Trp Val Pro
        35                  40                  45
```

```
Asp Gly Lys Ile Ile Thr Thr Phe Thr Ser Leu Leu Ser Asp Thr Asn
    50                  55                  60

Gly Tyr Val Leu Arg Ser Asp Lys Gln Lys Thr Ile Tyr Leu Val Phe
65                  70                  75                  80

Arg Gly Thr Asn Ser Phe Arg Ser Ala Ile Thr Asp Ile Val Phe Asn
                85                  90                  95

Phe Ser Asp Tyr Lys Pro Val Lys Gly Ala Lys Val His Ala Gly Phe
            100                 105                 110

Leu Ser Ser Tyr Glu Gln Val Val Asn Asp Tyr Phe Pro Val Val Gln
        115                 120                 125

Glu Gln Leu Thr Ala His Pro Thr Tyr Lys Val Ile Val Thr Gly His
    130                 135                 140

Ser Leu Gly Gly Ala Gln Ala Leu Leu Ala Gly Met Asp Leu Tyr Gln
145                 150                 155                 160

Arg Glu Pro Arg Leu Ser Pro Lys Asn Leu Ser Ile Phe Thr Val Gly
                165                 170                 175

Gly Pro Arg Val Gly Asn Pro Thr Phe Ala Tyr Tyr Val Glu Ser Thr
            180                 185                 190

Gly Ile Pro Phe Gln Arg Thr Val His Lys Arg Asp Ile Val Pro His
        195                 200                 205

Val Pro Pro Gln Ser Phe Gly Phe Leu His Pro Gly Val Glu Ser Trp
    210                 215                 220

Ile Lys Ser Gly Thr Ser Asn Val Gln Ile Cys Thr Ser Glu Ile Glu
225                 230                 235                 240

Thr Lys Asp Cys Ser Asn Ser Ile Val Pro Phe Thr Ser Ile Leu Asp
                245                 250                 255

His Leu Ser Tyr Phe Asp Ile Asn Glu Gly Ser Cys Leu
            260                 265
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<213> Thermomyces lanuginosus

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Ser Ala Ala Ala Tyr Cys Gly Lys Asn Asn Asp Ala Pro Ala Gly Thr
20 25 30

Asn Ile Thr Cys Thr Gly Asn Ala Cys Pro Glu Val Glu Lys Ala Asp
35 40 45

Ala Thr Phe Leu Tyr Ser Phe Glu Asp Ser Gly Val Gly Asp Val Thr
50 55 60

Gly Phe Leu Ala Leu Asp Asn Thr Asn Lys Leu Ile Val Leu Ser Phe
65 70 75 80

Arg Gly Ser Arg Ser Ile Glu Asn Trp Ile Gly Asn Leu Asn Phe Asp
85 90 95

Leu Lys Glu Ile Asn Asp Ile Cys Ser Gly Cys Arg Gly His Asp Gly
100 105 110

Phe Thr Ser Ser Trp Arg Ser Val Ala Asp Thr Leu Arg Gln Lys Val
115 120 125

Glu Asp Ala Val Arg Glu His Pro Asp Tyr Arg Val Val Phe Thr Gly
130 135 140

His Ser Leu Gly Gly Ala Leu Ala Thr Val Ala Gly Ala Asp Leu Arg
145 150 155 160

Gly Asn Gly Tyr Asp Ile Asp Val Phe Ser Tyr Gly Ala Pro Arg Val
165 170 175

Gly Asn Arg Ala Phe Ala Glu Phe Leu Thr Val Gln Thr Gly Gly Thr
180 185 190

Leu Tyr Arg Ile Thr His Thr Asn Asp Ile Val Pro Arg Leu Pro Pro

```
        195                 200                 205

Arg Glu Phe Gly Tyr Ser His Ser Ser Pro Glu Tyr Trp Ile Lys Ser
    210                 215                 220

Gly Thr Leu Val Pro Val Thr Arg Asn Asp Ile Val Lys Ile Glu Gly
225                 230                 235                 240

Ile Asp Ala Thr Gly Gly Asn Asn Gln Pro Asn Ile Pro Asp Ile Pro
                245                 250                 255

Ala His Leu Trp Tyr Phe Gly Leu Ile Gly Thr Cys Leu
            260                 265
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<210> 33
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<213> Penicillium camemberti

<400> 33

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            20                  25                  30

Lys Leu Ser Cys Ser Lys Gly Asn Cys Pro Glu Val Glu Ala Thr Gly
        35                  40                  45

Ala Thr Val Ser Tyr Asp Phe Ser Asp Ser Thr Ile Thr Asp Thr Ala
    50                  55                  60

Gly Tyr Ile Ala Val Asp His Thr Asn Ser Ala Val Val Leu Ala Phe
65                  70                  75                  80

Arg Gly Ser Tyr Ser Val Arg Asn Trp Val Ala Asp Ala Thr Phe Val
                85                  90                  95

His Thr Asn Pro Gly Leu Cys Asp Gly Cys Leu Ala Glu Leu Gly Phe
            100                 105                 110

Trp Ser Ser Trp Lys Leu Val Arg Asp Asp Ile Ile Lys Glu Leu Lys
        115                 120                 125
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Glu Val Val Ala Gln Asn Pro Asn